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# Cultural Identity Development and Sensitivity to Minority Cultures

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# Cultural Identity Development and Sensitivity to Minority Cultures

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Abstract

Researchers are working toward understanding how to integrate the growing number of culturally and ethnically diverse students in college and create a campus climate that is supportive, united, and diverse. Previous studies have revealed that the dominant culture tends to rate campus climate more positively than minority cultures; a relationship mediated by unawareness of privilege. Research has found that few dominant or majority cultures are self aware of their cultural identity, and therefore do not acknowledge the privilege and culturally transmitted ways of being associated with it. The purpose of this study was to examine the presence of a dominant hearing identity and its relationship with sensitivity as defined by awareness of privilege, discrimination, behaviors toward and beliefs about the Deaf minority culture.

Chapter 1

## Introduction

As colleges and universities diversify, the importance of creating an environment that is both sensitive to and supportive of the social and academic needs of diverse students is imperative. Pluralistic and multicultural contexts have been shown to have significant effects on learning, interpersonal competencies, self confidence, amount of irrational prejudice, critical thinking, and level of civic and community involvement (Worthington et al, 2008). In addition, they are shown to promote flexibility, adaptability, and empathy for others (Ramirez, 1983). Based on this consensus, researchers have suggested that improving the cultural climate in higher education will be the preeminent criterion for defining excellence in academics (Milem et al., 2005)

Despite Colleges and Universities engagement in systematic efforts to become more proficient, knowledgeable and responsive to multicultural concerns (APA,2002) their efforts fail to explore diversity issues related to differences in age, gender, socioeconomic status, physical ability, sexual orientation, religion, or geographic/cultural origin (Hurtado, 2008). This shortcoming, specifically the finding that individuals who belong to minority cultural and ethnic groups tend to rate their overall campus experience more negatively than their majority group peers, suggests that there is still significant progress to be made to provide a sensitive cultural college climate (Worthington et al, 2008).

Further research has found that the positive evaluation of campus climate by majority groups was mediated by Color Blind Racial Attitudes (CoBras) (Neville et al., 2000), specifically unawareness of privilege (Worthington et al., 2008). Related to notions of social dominance theory, or individual preconceptions about the acceptability of the social dominance of one group

over another, and the extent to which people believe that race in an unimportant part of social discourse, the presence of CoBras are theorized to be particularly salient for whites who in American culture largely define the legal, social, and cultural dimensions of society (Worthington et al, 2008).

Because these attitudes are largely based on social dominance, it is likely that similar relationships exist amongst other majority/minority cultural groups. One such example is the relationship between the majority hearing and minority deaf/HH students on a college campus in which deaf students attend classes and share extracurricular activities with hearing students. Helms' (1990) White Identity theory offers a conceptualization of this identity process; similar to whiteness, hearingness is a seemingly invisible identity because of its representation as institutional normality. Many students are initially unaware of the ways in which hearingness impacts the opportunities/privileges they are afforded. However, through shared experiences and confrontation of oppression one begins to understand the privilege associated with his or her dominate cultural group which results in a strong identity.

Based on previous research, a strong identity is predictive of greater openness to out-groups and improved well being (Romero & Roberts, 1998; Saylor & Aries, 1999; Santos et al, 2007). Theoretically, a strong identity will provide one with the knowledge that membership in a cultural group may have privileges and culturally shaped ways of being associated with it. Therefore individuals who lack a strong cultural identity may also lack the awareness that is essential for acknowledging that one's values, beliefs, knowledge, and behaviors are not universal norms but rather culturally shaped ways of being (Lynch, 2004) and therefore lack sensitivity with different cultural groups.

The current study will examine one's hearing identity on a culturally diverse university by examining the relationship between one's hearing cultural identity and attitudes toward the minority Deaf culture. Specific factors such as an individual's exposure to Deaf culture as well as demographic information will be examined to determine whether differences exist between groups. The primary goal of this study is to gain a better understanding of the complex relationship between cultural identity and sensitivity to minority cultures. This information can then be used in order to inform decision making processes regarding campus climate and cultural diversity at the university wide level.

*Definition of Terms*

*Sensitivity to Minority Cultures* is defined as an understanding of the privilege associated with majority group status, an awareness of the unique challenges that minority status can create as well as the acknowledgement that the cultures may be separate but are of equal value.

*Deaf Culture* refers to a particular group of deaf people who share a common language (ASL) and culture (Woodward, 1997).

*deaf* refers to the audiological condition of deafness.

*Color Blind Racial Attititudes* are new forms of racial attitudes that are related to, but distinct from, racial prejudice, considered acceptable notions of racial prejudice such as covertly blaming people of color for unequal outcomes in educational, occupational, and economic contexts (Neville et al, 2000)

Chapter 2

## Literature Review

As society continuously diversifies, major Universities have strived to keep up and create an environment that is both multicultural and sensitive to the needs of different cultures and ethnicities. While civil rights advances of the last 50 years and mandates such as affirmative action have had an impact of the number of culturally and ethnically diverse people who enroll in college, researchers are still working toward understanding how to improve the integration of all of these different groups and create a campus climate that is supportive, united, and diverse (e.g., American Association of Colleges and Universities, 1995). Attempts to measure campus climate are revealing in that they show that the dominant culture tends to rate campus climate more positively than minority cultures; a relationship which was mediated by the presence of Color Blind Racial Attitudes, or an unawareness of privilege (Worthington et al, 2008). Further complicating this issue is the fact that so few dominant or majority cultures are self aware of their cultural identity, and are therefore unaware or do not acknowledge the privilege and culturally transmitted ways of being associated with it (Lynch, 2004).

Research has shown that a multicultural context helps individuals develop flexibility, adaptability, and empathy for others (Ramirez, 1983). Based on the many benefits of a multicultural society, it is imperative that universities and colleges develop a better understanding of the dominant group identity and the relationship between one's own cultural identity in a diverse setting and attitudes toward multiculturalism and diversity (Worthington, 2008). In this review, contemporary and historical theories of ethnic and cultural identity will be explored. The role of cultural identity and diversity in promoting well being will be examined through a review of research. Finally, theories of dominant group identity development, namely

whiteness, will be examined as they relate to both the presence and development of a dominant "hearing identity" in a culturally diverse setting.

**Identity Development**

Erikson's theory of psychosocial development (1950) proposes that individuals must navigate eight psychosocial stages or crisis which correspond to and have salience in specific developmental periods of an individual's life. Erikson believed that the optimal resolution of any one stage was reached when there was a "favorable ratio" between poles of a stage. Because Erikson believed that these stages were on a continuum, one's ability or inability to navigate these developmental crises has the capability to affect one's future development. Beginning in adolescence, Erikson proposed that individuals are faced with the developmental task of identity formation. The construction of an identity requires that individuals explore who they are and what their ideals are; combining these seemingly disparate aspects of the self and forming a continuous and constant sense of self across time and situations (Erikson, 1968). Failure to successfully navigate this crisis and develop a strong sense of fidelity in one's identity can lead to significant distress and role confusion.

Although Erikson proposed that identity formation occurs primarily in adolescence, he also alluded to certain exceptions made for individuals in modern/western societies. Coined as psychosocial moratorium, Erikson described this prolonged adolescence as a period "during which the young adult through free role experimentation may find a niche in some section of his society" (Erikson, 1968). More recent work, by Arnett (2000, 2006) has expanded on this idea of prolonged adolescence and suggests that this period, called emerging adulthood, is the prime developmental period for identity formation. This stage of emerging adulthood focuses on

individuals aged 18-25 years old, a time period which was once considered to be a transitory stop into young adulthood. Arnett (2000) argues that demographic shifts, including postponing marriage and children as well as increased enrollment in higher education over the past half century have made this age a distinct period of the life course. Characterized by change and exploration of possible life directions, the emerging adult's identity explorations are not limited to direct preparation for adult roles but are explorations for their own sake, part of obtaining a broad range of life experiences (Arnett, 2000).

The increased cognitive capacities of emerging adulthood as well as new contexts and experiences that characterize this time period, serve as catalysts in identity development and renegotiation (Syed & Azmitia, 2008). The most salient areas of identity change for the emerging adult are in love, work, and worldview or more specifically, ones sexual identity, vocational identity and cultural identity (Arnett, 2000). For both vocational and sexual identity, roles become more focused and lead toward eventual life goals and desires. Vocationally this may be pursuing the appropriate educational and job opportunities, while also exploring ones identity, "what am I good at, what would make me happy?" Sexual identity in emerging adulthood shifts away from the here and now and involves a deeper level of intimacy. The implicit question of this exploration is more identity focused: Given the kind of person I am, what kind of person do I wish to have as a partner through life? (Arnett, 2000).

**Ethnic Identity Development**

World view and cultural identity exploration are also vitally important during this time period. Higher education leads to exposure to a variety of different worldviews, and in the course of these exposure college students often find themselves questioning the worldviews they

brought in (Perry, 1970). The role of the peer becomes critically important to the emerging adult as they encounter culturally and ethnically diverse people who often serve as tools in understanding their own ethnicity and cultural identity (Syed & Azmitia, 2008). Whereas cultural identity is broad and can include many different aspects of the individual, one very important and commonly studied aspect of cultural identity is ethnic identity, the sense of membership in an ethnic group and the attitudes and feelings associated with that membership (Phinney, 1996). Much of the early research done on ethnic identity was carried out by Lewin (1948), who theorized that individuals need a firm sense of group identification in order to maintain a sense of well being . Tajfel and Turner (1979) further developed this idea with their social identity theory, which posited that simply being a member of a group provides individuals with a sense of belonging which contributes to a positive self concept. Tajfel (1978) believed that ethnic groups presented a special case of group identity, particularly when the dominant group in a society holds the traits or characteristics of one's ethnic group in low esteem. Tajfel proposed that individuals who where members of these low-status groups would attempt to increase their status in culture in three ways: passing as members of the dominant group, developing pride in one's group, or stressing the distinctiveness of their own group . Tajfel and Lewin (1948) were also very interested in the effects of identification with more than one ethnic group. Specifically, they discussed the likelihood that a bicultural affiliation would be problematic for individuals because of conflicts in attitudes, values, and behaviors between their own and the majority culture.

Contemporary research on ethnic identity takes a less pathological view of acculturation and biculturalism than prior work, and employs a stage model of development. Within stage models, there are two schools of thought, linear and two dimensional. Linear models suggest that the presence of a strong membership in one group weakens ones identity in another and a strong

ethnic identity is not possible among those who become a part of mainstream society. The best known linear model is Phinney's (1989) model of ethnic identity. This model which incorporates Marcia's (1966) developmental model of identity statuses and Tajfel and Turner's (1986) social identity theory, identified both achieved and moratorium statuses but was unable to reliably distinguish between foreclosed and diffused individuals (Syed & Azmitia, 2008). This indistinguishable group was later labeled as unexamined (Phinney). Unexamined individuals have shown little exploration in the meaning of their ethnicity and have no clear personal understanding of their ethnicity (Syed & Azmitia, 2008). Phinney (1996) proposed that this stage is common in young children and adolescents because they tend to accept the values and attitudes of those in their community. Moratorium status represents individuals who show an increasing awareness and interest in their ethnicity, but have yet to make a commitment to their identity. This stage may be particularly stimulated by the developmental issues which drive Erikson's Ego Identity (1968), such as exposure to a wider world and the people in it and school transitions (Phinney). Finally, achieved individuals showed clear evidence of exploring what their ethnicity means to them and have accepted and internalized an ethnic identity (Syed & Azmitia). This model expects that individuals move through the status' in a linear fashion, beginning with unexamined and ending in an achieved status with some fluctuations or regressions due to the normal identity development process (Phinney & Chavira, 1992; Syed, Azmita & Phinney, 2007).

Recently, research has embraced the idea of a two-dimensional model. This model emphasizes that acculturation is a multi dimensional process by which the relationship with the dominant culture and ethnic culture may be considered independently of one another, and group members can have both strong or weak identification with their own and mainstream culture

(Phinney, 1989). This model suggests that there are not simply two extremes of acculturation but as many as four possible ways (Berry et al, 1986). Strong Identification with both the dominant group and ethnic group is indicative of biculturalism, identification with neither group suggests marginality (Phinney, 1999). An individual who is associated with only the dominant culture is considered to be assimilated while a person who identifies only with the ethnic group is considered to be indicative of separation (Phinney, 1999).

While there continues to be criticism of stage models and their ability to capture the many factors that shape an individual's cultural and ethnic identity these stage models are currently the most widely used and empirically validated methods for studying this aspect of development. One criticism of the stage models is that they fail to capture the diversity of experiences that people have. Both models suggest that different life events and changes can cause an individual to move to more advanced or regressed levels. Traditional models suggest that movement within stages is due to exposure to racism or prejudice while contemporary models suggest that it can be due to environmental, contextual, or personal changes.

In support of contemporary identity models, studies have examined the different factors such as context, family, and environmental change which can affect the ethnic identity of individuals. One major area of study which has been examined as a catalyst for ethnic identity development is the salience of the trait which identifies the individual and the spontaneous mention of it in identity (McGuire & Padaer-Singer, 1976). For example, an African American individual who is asked to "tell me about yourself" in the context of an all white school is more likely to mention the fact that they are black. This finding is based on the idea that a given trait would be spontaneously salient in an individual's self concept to the extent that this trait was distinctive for the individual in his or her social milieu (McGuire & Padaer-Singer, 1976).

Another study by McGuire et al (1978) found additional support for the distinctiveness hypothesis as only 1% of the majority, white-English speaking group spontaneously mentioned their ethnicity where as 17% of black respondents and 14% of the Hispanic respondents mentioned their ethnicity when asked to tell about themselves. Finally, a study conducted by French et al. (2000) looked at how racial congruence, the extent to which an individual is racially similar to the aggregate of people in his or her school, affected children in their transition to predominately minority schools. They found that as white children experienced a change in ethnic or racial composition in their transition to high school, it served as an ethnicity consciousness raising experience and led to greater ethnic identity exploration.

**Higher Education and Diversity Experiences**

The role of the diversity, particularly in institutions of higher education, in the development of identity is paramount. Research shows that the benefits of diversity are far ranging, spanning from individual students and the institutions in which they enroll, to private enterprise, the economy, and broader society (Milem et al, 2005). In addition, campus communities that are more racially and ethnically diverse tend to create more richly varied educational experiences that enhance student learning and better prepare them for participation in society (Milem et. al, 2005). When students encounter novel ideas and social situations they are forced to abandon automatic scripts and think in more active and imaginative ways. Duncan et al. (2003) found that youth who are exposed to diverse contexts are more empathic towards members of different groups. Further, they found that empathy promoted prosocial behaviors and was negatively related to aggression.

Despite these implications, the mere exposure to diversity is not enough. Researchers have suggested that members of historically under-represented groups tend to perceive campus climate differently, commonly as more unwelcoming or unsupportive, than their majority group peers (Ansis, Sedlacick, & Mohr, 2000; Hurtado, 1994). To understand this discrepancy, Neville and colleagues (2000) developed and validated the Color Blind Racial Attitudes Scale (CoBRAS). CoBRAS measure three main dimensions of modern racism: unawareness of racial privilege (race does not determine who is successful or not); covert denial of institutional racism (affirmative action discriminates unfairly against white people); and overt denial of blatant racial discrimination (racism is not a contemporary problem). Using this scale, Worthington and colleagues (2008), found that perceptions of Racial Ethnic Climate and General Campus climate were predicted by the presence of CoBRAS, specifically, unawareness of racial privilege. This relationship is further supported by research from Chang (2001) who found that students who interacted across social and educational settings and were exposed to conflicting opinions and beliefs saw the most profound benefits of diversity. Specifically, Chang found that by enhancing students' ability to adapt successfully to change, especially demographic and cultural shifts, while developing student's values and ethical standards through reflection on arguments and facts, significantly reduced levels of racial prejudice, as well as promoted students learning to think more deeply, actively, and critically when confronting their biases.

**Diversity Experiences and Identity Development**

The benefits of diversity and ethnicity consciousness-raising experiences in the development of an ethnic or cultural identity are significant. For example, a study conducted by Santos et al. (2007) examined the relationship between ethnic identity and college adjustment with emerging

adults on diverse college campuses. Researchers found that participants noted many positive effects. One such positive affect of campus diversity was the creation of a more mature and evolving sense of ethnic identity. Students shared that they strove to understand more about their culture and that of others because of this environment. A study by Saylor and Aries (1999) also supported college as a time where identity is strengthened for those who have a well developed sense of their ethnicity. These students specifically sought out ways of supporting their ethnic identity by joining cultural groups and forming friendships with same ethnicity peers. Further highlighting the importance of the college environment, Saylor and Aries (1999) found that involvement in ethnic groups and with ethnic people, was more predictive of a strong ethnic identity at the end of the academic year, than background variables and family, which had been more predictive in the beginning of the year (Saylor & Aries, 1999).

The ability of diverse experiences to promote ethnic identity has additional benefits for the individual. Specifically, a stronger ethnic identity has been associated with greater well-being among minority and immigrant youth (McMahon & Watts, 2002). Additionally, a study by Martinez and Dukes (1997) found that individuals with an achieved ethnic identity showed greater self-esteem, self-confidence, and purpose in life than those without a strong sense of identity. This relationship was consistent across groups, with higher ethnic identity scores predicting higher scores in self-esteem, purpose in life, and self-confidence (Martinez & Dukes, 1997). A strong sense of ethnic affirmation, or feeling of belonging to one's ethnic group, has routinely been associated with more positive attitudes towards members of the out-group (Romero & Roberts, 1998). These finding suggest that the presence of a strong ethnic identity may not only serve to promote a strong sense of personal well being, but may promote greater community well being and attitudes toward others.

**Deaf Identity**

Cultural identity can consist of any feature which is distinguishing to the individual. Although to this point cultural identity has been examined through the lens of ethnicity, there are infinite ways for one to identify the self: spoken language, geographical location, and religion to name a few. One of the most newly studied cultural identities is that of the Deaf culture. The word "deaf" is a means of commenting on one's inability to speak or hear: an audiological condition (Padden & Humphries, 1988). Beginning in the 1980's a new "Deaf" culture began to emerge. This "Deaf" culture refers to a particular group of deaf people who share a common language (ASL) and culture (Woodward, 1997). Members of the Deaf culture are distinguished from those who have lost their hearing and do not have access to the knowledge, beliefs and practices that make up the Deaf culture. This definition is not complete however and fails to acknowledge the many different levels of involvement in the Deaf culture and acculturation to the group. For example, the definition fails to recognize those who are newly deaf and not yet completely immersed, individuals who are willingly uninvolved, and individuals who are hearing but very much involved with the culture either through family or professional experiences (Padden & Humphries, 1988).

In order to better understand the many different identities within the Deaf culture, one must have a greater understanding of what it means to be culturally Deaf. Although united by a common language, there exists a tremendous amount of diversity within the group. There are no reliable figures on the number of Deaf people in the United States. Although accurate estimates exist about the number of hard of hearing or deaf individuals, it is difficult to get an idea of how many people belong to the culturally Deaf community. This problem exists because hearing

status alone is not a determinant of this identity and its members can range from profoundly deaf to hard of hearing. Additionally, the pattern of transmission is unique to the Deaf culture. Although between 11-30% of deaf school children inherit their deafness, fewer than 10% of children have Deaf parents, and thus the great majority of people do not join at birth. (Padden & Humphries, 1988, 2005)

While the idea of being labeled as deaf once carried with it a negative connotation as disabled and dumb, the cultural changes of the past 30 years have shifted this view to a state of being that makes a person a member of a unique cultural group with its own language, historical traditions, art forms and values (Maxwell Mc-Call et al., 2000). This shift has been seen most widely in the way that deaf children are educated. Most of today's deaf adults were educated at residential schools. These schools exposed children to a variety of experiences and time to be with Deaf adults and children. Residential schools allow children of both hearing and deaf parents to acquire the language and cultural content of the Deaf. The passing of public law 94-142 (IDEA, 1990), requiring schools to provide equal educational access and opportunities to disabled children, has lowered enrollment in such residential schools as more and more people have made the decision to have their children educated in mainstream, public schools with hearing peers (Maxwell Mc-Call et al., 2000).

Often the decision to educate in mainstream schools reflects the desire for the individual to adapt to the demands of the hearing world and have a "normal" life (Padden & Humphries, 1988, 2005). Many children who enter mainstream education have limited access to other deaf peers and unless they are exposed to Deaf culture as adults likely will not develop a relationship with the community. Further complicating one's Deaf identity development is the ongoing clash with mainstream hearing culture. Although rejection of hearing values has been an ongoing

theme in Deaf culture, deaf people have struggled to balance their membership in the deaf community with that of the hearing majority culture (Maxwell Mc-Call et al., 2000). Many have likened the identity struggles of the Deaf community with those faced by immigrating Americans; deaf people have hearing family members, employment requirements, and daily living that involve constant interactions with a hearing culture based on different values and expectations (Davis, 1995).

**Measurement of Deaf Identity**

Given the overlap in cultures and the need to move between them, Deaf identity formation has been an area of interest for researchers. Specifically researchers have worked to understand, how Deaf people move between the two cultures, balancing sometimes opposing values and expectations, and how identification with both or just one of the cultures affects well-being. One of the first attempts to measure Deaf identity development was Neil Glickman (1993). Using the racial identity model as a theoretical foundation, Glickman proposed that individuals move from a passive acceptance of hearing culture values towards and increasingly bicultural stance (Maxwell Mc-Call et al., 2000). The Racial Identity model (Sue & Sue, 1990, Helms, 1990, Ivey, 1991) describes the changes in consciousness and self-definition that members of oppressed groups experience as they move from oppression to liberation. Glickman's Deaf identity development model is a variant of such models and describes the move of audiologically deaf people toward a Deaf cultural identity (Glickman & Carey, 1993).

This model proposes that there are 4 Deaf cultural identities, the first of which is the culturally hearing identity. The culturally hearing model refers to the dominant hearing identity of deafness as pathological or a disability and is characterized by a passive acceptance of hearing

values. Glickman and Carey's (1993) understanding of this group is that they value hearing values as their norm point of reference, value oral communication such as lip reading or speech, and fit in comfortably within the larger hearing world around them. In this identity, an individual's deafness is minimized and they likely identify with their disability of hearing impairment rather than as a member of Deaf culture. There has been significant debate about this identity which assumes that it is at its core pathological, and does not represent ideal adjustment for the deaf person (Maxwell Mc-Call et al., 2000).

The second identity of Glickman and Carey's Deaf identity model refers to those who are culturally marginal and fit between the Deaf and hearing world, but are uncomfortable in both (1993). Because around 90-95% of deaf children are born to hearing parents, Glickman and Carey proposed that these children are culturally disadvantaged. Their parents are unlikely to know sign language, unfamiliar with the deaf world, and at least initially, devastated at their child's diagnosis as deaf (Glickman & Carey, 1993). The child's deafness complicates the acquisition of English and the normally fluid transmission of cultural values and norms of the hearing world and the parents lack of knowledge and exposure to the Deaf culture prevents their exposure to signing and culturally Deaf values (Glickman &Carey, 1993). This may in turn cause the child to develop without clear notions of hearingness or deafness (Leigh et al, 1998).

Glickman and Carey third model of deaf identity is called immersion. This cultural identity is relevant to the time in deaf person's life when they immerse themselves in the Deaf culture. Those with this identity have a positive and uncritical view of the Deaf world and denigrate the values of the hearing world. Additionally, hearing people are commonly depreciated while Deaf people are idealized (Fischer & McWhirter, 2001). Anger and resentment toward hearing people and culture may also be present, as they are often viewed as oppressive

and malevolent (Glickman & Carey, 1993). Immersion is also characterized by a reversal of hearing norms, American Sign Language is seen as superior to English, and Deaf people are discouraged from practicing the oral tradition of spoken language, signing in English word order, or using hearing aids (Glickman & Carey, 1993).

The final Deaf identity proposed by Glickman and Carey (1993) is bicultural. Those with this identity have achieved some level of comfort in both the hearing and Deaf world (Glickman & Carey, 1993). Immersed individuals are secure with their Deaf pride, live by Deaf values, and are members of the Deaf community, but recognize the value of their supportive hearing contacts (Leigh et al, 1998). They can recognize and denigrate hearing oppression and paternalism, while not opposing hearing people (Glickman & Carey, 1993).They are also able to recognize the strengths and weaknesses of both cultures in part because they have achieved an inner security with their own deafness (Fischer & McWhirter, 2001). They possess the skills to comfortably navigate both cultures which is suggestive of better psychological adjustment and flexibility (Glickman & Carey, 1993)

These four models of cultural identity were proposed by Glickman (1993) to progress in developmentally related stages, culturally hearing or marginal people were expected to move toward a bicultural identity as they discover positive images of deafness and the Deaf world and immerse themselves in it. Glickman's concept of movement toward biculturalism was also flexible and he proposed that there were a number of factors which can affect forward progression including age of onset of hearing loss, degree of hearing loss, whether one is born into deaf or hearing family, attitude of one's parents towards ASL and the Deaf community, and educational and social experiences.

From these theoretical identities, Glickman and Carey (1993) developed the Deaf Identity Development Scale (DIDS). Created to measure the cultural orientations in deaf people, an original bank of 84 questions were evaluated by leading Deaf and hearing experts and narrowed down to 15 items to assess each of the cultural constructs, for a total of 60 questions (Leigh et al, 2000). The DIDS was originally designed and written in English then later translated into American Sign Language and videotaped. Statistically, it was found that all the items correlated most positively and strongly with their own scale. Additionally, internal consistency exceeded the interscale correlations, indicating that the scales measured similar but not identical constructs (Glickman and Carey, 1993). Glickman and Carey made suggestion to improve the measure citing the need to add additional items and improve interscale correlations. While Glickman and Carey's work was not yet ready to be used in academia, they showed that it was possible to provide an operational measure of Deaf people's orientation to and affiliation with the Deaf community.

Further development on the Deaf Identity Development Scale was carried out by Leigh et al, 1998. The DIDS was modified to include hearing individuals and examine how both hearing and deaf adults identified themselves. This scale was modified in the hopes that it would help to indentify, "who it is that represents the true Deaf culture", a question that is important not only for the Deaf but for the hearing whose lives are bound to the Deaf culture, for example, hearing adult children of Deaf parents and hearing adults working in the Deaf community. Focusing most specifically on the hearing children of Deaf adults, or CODAS, Leigh and colleagues recognize the important paradox of children born in this family situation. Codas have internal knowledge of the Deaf community but are often denied full identification with Deaf culture because of their hearingness (Higgins, 1980, Padden & Humphries, 1988). Because of these issues, CODAS and

hearing professionals within the Deaf community struggle with cultural affiliation and identity, and showcase the idea of Deafness as a culture rather than as a disability.

To examine the DIDS's appropriateness for hearing, hard of hearing, and Deaf individuals, Leigh and colleagues were forced to modify items which were applicable to only deaf participants. For example, a question which stated "I feel good about being deaf, but I involve myself with hearing people also" was modified to address non-deaf participants as follows, "I feel good about being with Deaf people, but I involve myself with hearing people also" (Leigh et al, 1998). Leigh and colleagues found that the Modified Deaf Identity Development Scale was useful for assessing one's cultural affiliation in terms of the Deaf-Hearing continuum; however, the bicultural scale was problematic because of low internal consistency and its failure to differentiate well among groups surveyed in the study. The bicultural scale was found to be biased because of its tendency to elicit socially desirable responses from participants. Leigh and colleagues suggest that researchers look instead at one's scores on both immersion and hearing scales to determine biculturalism.

The work of both Glickman (1993) and Leigh (1998) has been pivotal in influencing the direction of Deaf identity development research. A close look at the DIDS prompted researchers Maxwell and Zea (1998) to note areas in need of improvement. Specifically, the 4 subscales of the DIDS tended to mix several dimensions of identity; attitudes, behaviors, and psychological identification, making it difficult to assess the contribution of each to identity. This can be seen the greatest in the bicultural scale. While the other subscales mix the aforementioned dimensions of identity, the bicultural subscale was made up of primarily attitudinal items and thus contributed to socially desirable response styles (Maxwell Mc-Call et al., 2000). Another major problem with the DIDS is that it theoretically assumes that affiliation with the hearing world is

pathological for deaf people. In the current culture where biculturalism is seen as a more positive light, this may not reflect the true meaning of affiliation with hearing society (Maxwell Mc-Call et al., 2000)

These considerations led Maxwell and Zea (1998) to conceptualize deaf and hearing identities in an all new way. In the Deaf Acculturation Scale (DAS) they focused on the bicultural/acculturation model and how ongoing deaf-hearing identities could be applied to deaf groups (Maxwell Mc-Call et al., 2000). The DAS was designed to measure each of the identity dimensions, behaviors attitudes, and psychological identification with hearing and deaf cultures, and competence separately, in hopes that each element could be broken down and examined individually for its contribution to identity. Additionally, the DAS was designed to avoid the pathological bias of the DIDS. Instead of assuming that a hearing person would suffer psychological damage and self depreciation if not acculturated with the Deaf culture, Maxwell and Zea designed to scale to represent the normative identity process. They believe that the period of immersion does not have to be characterized by hatred and loathing rather it can be a period of exploration on its own. Also, like models described earlier, the DAS does not presuppose any kind of developmental stage or sequence and does not require hierarchical progression through the stages.

The Deaf acculturation scale was developed from a scale designed for assessing acculturation in Latino-Americans (Birman & Zea, 1998) and modified to fit deaf individuals. Overall, the scale is made up of two acculturation scales, one which reflects acculturation to deaf culture (DAS-d) and one which represents acculturation to hearing culture (DAS-h)(Maxwell Mc-Call et al., 2000). Five subscales measure cultural identification: the internalization the cultural values associated with both deaf and hearing; cultural participation; the-degree to which

they participate in various cultural activities; cultural preference; one's preferences for friends, lovers, spouses, educational and work experiences to be either deaf or hearing; language competence, the expressive and receptive skills of ASL or the spoken or written English skills; and finally, cultural knowledge; deaf world knowledge (dwk) and hearing world knowledge (hwk). Scores from each of these subscales are mathematically combined and divided into four groups, hearing acculturated, marginally acculturated, deaf acculturated, and bicultural.

To test the reliability and validity of this scale, Maxwell-McCaw and Zea (2000), conducted principal components analysis with both the longer version and the current 58 item version of the DAS. Researchers found that the subscales measure acculturation across several distinct, but related domains with the exception of the hearing cultural identity scale. Additionally, they found that the five factor model had an excellent fit for the Deaf acculturation scale (DASd), yet none of the models had a good fit for the hearing acculturation scale (DAS-h). Maxwell-McCaw and Zea proposed a number of possible explanations for why the hearing cultural identity subscale did not emerge as a distinct factor in the DASh and it did for the DASd. Because their sample consisted of people with some level of deafness, they proposed failure to find a hearing acculturated group may have been due to sample bias and suggested additional work with a larger sample consisting of deaf, hard of hearing, and possibly hearing people as well. They also proposed that a psychological barrier prevents individuals with varying levels of hearing loss to identify as hearing acculturated, findings which have been found with various ethnic groups (Zea et al, 2003). Maxwell-McCaw and Zea suggested that future work try to indentify the hearing acculturated group by studying oral deaf, hard of hearing, and hearing people with no exposure to the Deaf community as well as professionals who work with Deaf people to elucidate this subtype

**Development of Hearing Identity**

Despite the progress that researchers have made in attempting to understand Deaf identity, little is known about the development of a hearing identity. Specifically, how do individuals become aware of their status as a hearing person and what does this mean for them? In *Writing Deafness: The hearing line of nineteenth-century American literature,* author Christopher Krentz describes how the examination of deaf presence makes it such that one begins to see that hearingness is not an absolute or given, but something subjectively imagined or formed. Rather than a distinguishable and observable feature such as ethnicity, hearingness describes a realization of what is not. Hearingness represents the understanding that one relies on auditory stimuli and lives in an auditory world. It is the realization that the life of a Deaf and Hearing person are different, and that their cultural ways of being as well as their experiences and understanding of this world are not the same. A sense of hearingness is something that, unless provided with diverse experiences in which to explore and understand these concepts, may not develop for all people. Therefore, a hearing identity may only become relevant for those whose lives are somehow entwined with the Deaf culture, either by choice or chance. It is then the individual who must conceptualize the role that hearingness plays in their identity to form a new and ever evolving identity.

Krentz draws comparisons between a hearing identity and that of other seemingly invisible dominant group identities, such as whiteness. Like whiteness, hearingness is seemingly invisible because of its status as a dominant 'culture' in society. In addition, like whiteness, hearingness is transparent because of its everyday occurrence and its representation as "institutional normality".

Sue (2004) has examined "what it means to be white", and found that people were largely unaware of what being white meant for them, acted confused by the question, stated they had "never thought about it", or were annoyed at the idea that they were racist or elitist (Sue, 2004). This theme is repeated throughout European American Society which typically claims there is no "white" culture with statements such as; "I don't have a culture, I'm just white" or "I am just American" (Bylund, 2009).

Furthermore, Helms' (1990) model of white identity supports these concepts. This model assumes that Whites are generally unaware of the implications of being white, and little or no thought is given to the thought of ethnicity initially. However, with experience, the presumed advantages of whiteness and the inequalities faced by minorities may be recognized. Though the individual experience may be unique, the realization of these inequalities may promote feelings of guilt, discomfort, and denial. It is theorized that some whites will remain at this stage, where as others will reexamine their attitudes and become more aware of their potential contribution to racism. At this point, the White individual recognizes the need to confront racism and oppression and comes to value differences thus leading to the ability to relate to minorities and become more open to dealing with other groups (Helms, 1990).

Given this model, one could presume that hearingness develops in a similar manner. Although an individual may be largely unaware of what it means to be a hearing person initially, through experiences with diversity and the Deaf culture, he or she may come to see that their status as "hearing" means something very different. For example, at a college university in which there is a large minority of deaf students who attend classes with hearing students, and participate in the same extracurricular and social events; though a hearing student may initially think that it is unfair that deaf students get preferential seating, access to notes, and reserved

spots in classes, through development and sharing of experiences, one may begin to understand the unique challenges faced by a deaf individual. Rather than see deafness as a handicapping condition and feeling sorry for them they begin to see that the individual lives a full and rich life. They begin to understand how hearingness impacts who they are and the opportunities they will have in life because despite their acceptance and appreciation of the Deaf culture, not all people will share this perspective.

Though Helms' model (1990) may apply to many Whites and likewise hearing individuals, it generally fails to acknowledge that many people do not perceive any privileges associated with their dominant culture. Regardless of the seemingly invisible nature of hearingness or whiteness, one's affiliation with these dominant cultures, conscious or unconscious, effects how the individual thinks, believes, and behaves. This self awareness is essential for acknowledging that one's values, beliefs, knowledge, and behaviors are not universal norms but rather culturally shaped ways of being (Lynch, 2004).

If the awareness of a hearing identity is seemingly invisible in the dominant culture, how then does one become aware of their identity as hearing? Described by H-Dirkson Bauman in his 2009 review, of *Writing Deafness: The hearing line of nineteenth-century American literature*, is the notion of "becoming hearing", a time when he discovered this hearing aspect of his identity. Working as a youth counselor at a residential school for the Deaf, he describes himself as so accustomed to hearing and speaking that he "could not recognize they were the warp and woof of my everyday consciousness". This sudden contrast with a majority Deaf culture at the residential school made his status as a hearing person evident. This experience is supported by research with ethnic minorities (McGuire & Padear-Singer (1976), French et al. (2000), in which

these cultural identity consciousness-raising experiences, or sudden realizations of a distinct other, promote awareness and interest in an individual's cultural identity.

A strong cultural identity, in this case a Hearing identity, possibly promotes the same type of personal and institutional well-being as demonstrated with a strong ethnic identity. (Saylor & Aries, 1999; Santos et al., 2007). Furthermore the presence of a well developed sense of a hearing identity, or ethnic/cultural affirmation, may promote openness to out-groups, such as the minority Deaf culture (Romero & Roberts, 1998). Therefore, it is hypothesized that individuals who have a well developed hearing identity would show the highest levels of sensitivity to the minority Deaf culture as well as hold the most favorable attitudes toward them. Likewise, individuals who show low identification with their hearing identity will hold less favorable opinions of the Deaf culture and display low levels of sensitivity.

It is predicted that this relationship will be mediated by a number of variables which primarily relate to ones exposure to the Deaf culture. Research has supported the fact that individuals with more exposure and participation in diverse social and educational settings such as in secondary education show greater empathy, prosocial behavior, and openness to new ideas, and less prejudice, and aggression (Chang, 2001; Worthington et al, 2008; Duncan, 2003; Milem et al, 2005). Therefore it is predicted that students with higher levels of exposure as indicated by contact with Deaf/HH culture prior to college, endorsement of having hard or hearing or Deaf friends, year in school, and hearing status, may all be predictive of higher levels of sensitivity. Based on previous research, it is also hypothesized that individuals of ethnic minority status may show higher levels of sensitivity to Deaf culture, as minority youth typically have a more developed sense of ethnic identity and greater levels of ethnocultural empathy toward out-groups (Nesdale, Griffith, Durkin, Maass, 2005). The examination of Hearing Identity as well as the

attitudes and beliefs associated with this cultural group will contribute to greater understanding of the relationship between cultural identity development and sensitivity to diversity experiences.

# Chapter 3
# Method

## Participants

An online survey was sent to approximately 16,000 students attending a private University in western New York in the winter of 2010. This University was chosen out of convenience and because of the student body composition. Potential participants were contacted through the University's "Academic Affairs" electronic mail list serve. The exact number of people contacted could not be determined because students are given the ability to opt out of receiving campus email. The original respondent sample consisted of approximately 1,600 participants; however, due to incomplete responses the final sample consisted of 1,507 participants, which reflects a response rate of approximately 9%. Despite the low response rate, the sample appears to be representative of the population of the University (Table 1), and therefore can likely be generalized to the specific college population. Respondents included 729 Males (48.4%) and 733 Females (48.6%). Participants were distributed evenly amongst academic years in school (Table 1) and had a mean age of 22 years (n=1463, SD= 5.4). The majority of participants (74.1%) were Caucasian (n=1116), followed by (10.9%) Asian (n=164), 4.5% Hispanic (n=68), (3.3%) African American (n=49), and (4.5%) Other (n=68). Though all students were eligible to participate in this study, Deaf and Hard of Hearing students were excluded from study analyses (n=129).

## Measures

**Demographic Information.** Information regarding relevant student characteristics was obtained through background questions (Appendix B). Specifically of interest was information regarding past exposure with deaf and hard-of-hearing individuals. In addition information about academic standing, current year in school, and subject area was collected.

**Hearing Identity.** Hearing identity was assessed with a revised and reformulated version of the abbreviated multidimensional acculturation scale (AMAS-ZABB) (Zea et. al, 2003). The AMAS-ZABB is a 42 item survey which has been validated with both community and college samples. Development of this tool was based on an acculturation model which suggests that cultural competence and identity are distinct dimensions within a particular individual. Designed to be adaptable for use with other groups exposed to change and to meet the needs of a continuously diversifying culture; the tool was developed to assess cultural competence, language competence and cultural identity. The AMAS-ZABB showed strong internal consistency with alpha coefficients ranging from .90-.97, and good construct validity (Zea, Asner-Self, Birman, & Buki, 2003)

For the purpose of the current study, the AMAZ-SABB was used as a guide to develop questions that suited this study. The six items which assessed cultural identity were reworded and used to fit an exploration of hearing identity. (Appendix C) Because these items originally measured ethnic identity, specifically, U.S. American identity, they were transformed to fit hearing identity. For example, an item that read, "I think of myself as being a U.S. American" was changed to "I think of myself as hearing". The response choices provided on the AMAS were also altered. Instead of a 4 point likert scale, with options ranging from strongly disagree (1) to Strongly Agree (4), the adapted hearing identity scale provided respondents with three response choices, No (1), Not sure/Never thought about it (2), and Yes (3). Items were piloted with small group of school psychologist students and corrective feedback was provided on items that were ambiguous or difficult to understand.

**Sensitivity toward Deafness.** Attitudes toward deafness were evaluated to measure sensitivity and sensitization to deafness on campus (Appendix D/E). Items assessing attitudinal

beliefs about deafness were drawn from several measurement tools, specifically, Color Blind Racial Attitudes Scale (CoBRAs)(Neville et. al, 2000) and Deaf Identity Development Scale (DIDS) (Glickman and Carey, 1993). Items were also added by the researcher in order to collect a comprehensive battery. The CoBRAs was developed to measure new, more politically correct forms of racial attitudes that are similar to, but distinct from racial prejudice. While an individual may refrain from expressing overt racial prejudice, they may simultaneously hold racial attitudes that blame people of color for unequal outcomes in educational, occupational, and economic contexts. According to Neville and colleagues, the CoBRAs have three main dimensions that can be seen most commonly in socially dominant groups: Unawareness of Racial Privilege (race does not determine who is successful), Covert Denial of Institutional Racism (affirmative action is discriminatory practice against white people), and overt denial of blatant racial discrimination (racism is not a contemporary social problem). Internal consistency for the measures is as follows: $\alpha$=.8 for Unawareness of Racial privilege, and $\alpha$=.78 for Institutional Discrimination.

Given that these attitudes are seen commonly in socially dominant groups, researchers redesigned the questionnaire to reflect the hearing/deaf paradigm. For example, a question such as "White people in the US have certain advantages because of the color of their skin" was reworded as "Hearing people in college have certain advantages because of their hearing status". Items from the original measure which did not fit hearing/deaf or where repetitive were dropped from the questionnaire. The final product resulted in 9 items, 4 which reflected unawareness of privilege, and 5 which reflected covert denial of institutional racism. The original 6-point likert scale ranging from 1 (Strongly Disagree) to 6 (Strongly Agree) was not utilized, and instead three response choices were provided: No (1), Not sure/Never thought about it (2), and Yes (3), .

The Deaf Identity Development Scale (Glickman and Carey, 1993) was created to measure the cultural orientation of deaf people. An original bank of 84 questions were evaluated by leading Deaf and hearing experts and narrowed down to 15 items to assess each of the cultural constructs (Marginal, Hearing, Bicultural, and Immersed) for a total of 60 questions (Leigh et al, 2000). From these 60 items, 13 items which examined attitudinal beliefs were utilized. Specifically, 6 items from the Hearing Scale, 2 items from the marginal scale, and 5 items from the Bicultural scale. The original DIDS utilized a 5 point Likert Scale, however in order to combine this measure with the CoBRAs and develop a unitary index, this scale was administered with the same 3 point scale ranging from No (1), Not sure/Never thought about it (2), and Yes (3) . When used as a tool to measure identity status, a known weakness of the DIDS is its tendency to mix several dimensions of identity formation (attitudes, behaviors, and psychological identification); however for the purposes of this study the selected items provided rich content regarding attitudes toward deafness.

These two measures were then combined to form one index of attitudes toward deafness. In addition, to allow for a more specialized analysis, items were then broken down into smaller groups to explore whether sub-groups in the studied population showed differences in their sensitivity, when measured on a specific domain within this index. Specifically, this index was broken into the following 4 domains: Sensitivity to Privilege, Sensitivity to Discrimination, which align with Neville et al. (2000) CoBRAS scale, as well as Behaviors and Beliefs toward the Deaf/deafness. Reliability of these scales was determined and found to be within an acceptable range.

**Procedure**

Following Institutional Review Board (IRB) approval, potential participants were contacted via the University through electronic mail asking them to participate in a study about campus diversity (Appendix A). All students were eligible to participate in the study. Students interested in the study were then sent to the Clipboard online survey tool. Individuals were notified of any potential risks associated with participating and were told of their right to discontinue their involvement at any time without penalty. Consent was obtained and participants were directed to complete the survey. To ensure that only university students participated, a student user name and password was required to log in to the survey. After completion of the study, participants were notified that they would be entered into a drawing to win a $50 Barnes and Noble Gift Card.

Confidentiality was maintained by the Clipboard program. Though it required a student username, all surveys were made anonymous by assigning an electronic participant code. Additionally, no identifying information was included in the survey itself. Upon completion of the survey participants were redirected to another survey, unrelated to the previous survey, in order to provide their preferred contact information to be entered into a drawing.

# Chapter 4
# Results

## Cronbach's Alpha-Sensitivity and Hearing ID

In order to assess the internal consistency and reliability of the Sensitivity and Hearing Identity scales, Cronbachs Alpha was calculated. The reliability coefficient for the 23 items on the Sensitivity Scale which was comprised of revised items from both the Color Blind Racial Attitudes Scale (Neville et al., 2000), and the Deaf Acculturation Scale (Maxwell Mc-Call et al., 2000), was $\alpha$=.66. In addition The Global Sensitivity scale was divided into four specific sensitivity domains; Privilege (4 items), Discrimination (4 items), Behaviors toward Deaf students (9 items) and Beliefs about Deaf students (6 items). The Cronbachs Alphas for the four domains were Privilege ($\alpha$=.54), Discrimination ($\alpha$=.67), Behaviors toward Deaf ($\alpha$=.75), and Beliefs about Deaf ($\alpha$=.68).

The Cronbach's alpha for the Hearing Identity Scale (6 items) was $\alpha$=.72, indicating a moderate reliability. By removing the item "If I could choose three words to describe me, hearing would be one of them", the internal consistency increased to an alpha level of .76, which is moderate and sufficient for research purposes. Because of its increased reliability, this revised 5 items scale was used in subsequent analyses.

## Hearing ID-Relationship with Sensitivity

To determine groups which were high or low on the hearing identity scale, descriptive statistics were obtained to better understand sample characteristics. The mean hearing identity score for the hearing respondents was 7.38 (SD=2.5). To break this sample into two meaningful groups, individuals who fell in the lower quartile at a total score of 6 or below were assigned to a

Low Hearing Identity (Low-ID) group (n=418). In comparison respondents whose total hearing identity score fell in the upper quartile, at a score of 10, were assigned to a High Hearing Identity (High-ID) group (n=378).

It was hypothesized that individuals who were High-ID would show greater levels of sensitivity toward deaf students. In order to determine whether mean differences exist between High-ID and Low-ID samples, an Independent T-test was conducted. To ensure that the T-test was robust, the assumptions of normality, homogeneity of variance, and independence were assessed. Following qualitative and quantitative analysis the data appeared to be normally distributed. To assess for homogeneity of variance, the Levene statistic was analyzed. Though the Levene statistic was significant ($\alpha$=.034), the T-test was robust to this violation as the sample variances fell within an acceptable ratio of 4-1.

Results of the T-test did not support the hypothesis that High ID individuals are more sensitive to deaf students, as the mean of the identified Low-ID group showed significantly higher levels of sensitivity than the High-ID sample ($t$= 2.125, $df$= 794, $p$= .034). To determine the magnitude of this relationship, an effect size was calculated ($d$= 0.15). Although there is a statistically significant mean difference between the two groups, this difference is not meaningful in this sample and may need to be repeated with a larger sample. Possible reasons and hypothesis for this difference are examined in the discussion of this paper.

**Hearing Identity and Individual Differences in Sensitivity Scales**

The mean differences between the High ID and Low ID respondents on the individual domains: Privilege, Discrimination, Beliefs about Deaf students, and Behaviors toward Deaf students, individuals were examined to further explore the above finding that Low ID were more

sensitive than High ID. First, High and Low-ID respondents' mean sensitivity to privilege was assessed using an Independent T-test. Results indicated that the Low-ID group mean on the Sensitivity to Privilege domain was significantly lower than the High-ID group mean,($t$=2.952, $df$= 813, $p$= .003) indicating that the group was less sensitive to how hearingness provided them with privileges as a college student. In comparison, the Low-ID group means were significantly higher on the domains of Sensitivity to Discrimination and Beliefs about the Deaf ($t$= 3.177, $df$= 811, $p$= .002) at $\alpha$= .05; $t$= 2.499, $df$= 810, $p$= .013). Together, this indicates that the Low-ID group was more sensitive to how deafness creates unique educational challenges and held more favorable views of the Deaf. There were no significant findings when comparing the High and Low ID groups on mean levels of behaviors toward Deaf ($t$= 1.470, $df$= 809, $p$= .142).

**Exposure and Sensitivity**

Based on an individual's exposure to deafness, it was hypothesized that students who had more exposure to deaf individuals prior to enrolling in college or while in college would show greater levels of sensitivity. For the purpose of this study, endorsement of having deaf family, deaf friends, hard of hearing friends, living in the proximity of a large deaf population (hometown), sharing housing now or in the past with a deaf student and stated exposure prior to college were examined.

A One Way Analysis of Variance (ANOVA) was conducted to determine whether there were group differences in sensitivity for students who endorsed having exposure to deaf culture prior to college. After assessing for the assumptions of ANOVA, results indicate that there were between group differences in sensitivity when compared with minimal/moderate/daily exposure ($F_{(2,1281)}$=10.72,p=.00). Post Hoc comparisons using Tukey-Kramer correction ($\alpha \leq .05$) indicated

that the group who endorsed having Minimal prior exposure to deaf culture had significantly lower mean sensitivity score than groups with either moderate (p=.001) or daily exposure (p=.004). There was no significant mean difference between the group who endorsed having moderate to daily exposure to deaf culture (p=.564).

Additional factors regarding exposure were also examined. Results of a T-test indicated that students who reported to have deaf family (n=62) had significantly higher mean sensitivity to deaf individuals than those with no deaf family members (n=1218) ($t$= -3.064, $df$= 1278, $p$= .002). Cohen's D was calculated to determine the magnitude of this relationship and was found to be small (d=.39), which may be an artifact of sample size, or lack of a meaningful relationship. Individuals who endorsed that they had deaf friends (n=600) showed significantly higher mean sensitivity to deaf students than individuals who endorsed having no deaf friends (n=684) ($t$= -19.369, $df$= 1282, $p$= .000). Likewise, individuals who reported that they had hard of hearing friends (n=794) had higher mean scores on sensitivity to deafness than peers who endorsed having none (n=488) ($t$= -13.094, $df$= 1280, $p$= .00) at $\alpha$= .05. Cohen's D was once again calculated to determine the effect size and meaningfulness of this finding. Results found that effect was very large (d=1.085; d=.807) indicating that this is likely a meaningful relationship.

Finally, when comparing individuals who grew up in proximity of a large deaf population (n=1008) to those who did not (n=264), as well as students who have never shared housing with deaf/HH students (n=187) with those who do now or have in the past (n=1095), there were no group differences in sensitivity scores. ($t$=-1.203, $df$= 1270, $p$= .229) at $\alpha$= .05; $t$= -.991, $df$= 1280, $p$= .322).

**Sample Characteristics and Sensitivity**

To determine whether sample characteristics such as academic achievement and race had unique relationships with sensitivity levels, additional analyses were completed. First, GPA Scores were broken down into high achieving (upper quartile $\geq 3.75$) and low achieving students (lower quartile $\leq 3.1$). High and Low achieving students were then compared using an independent sample T-test to determine whether there were differences in sensitivity between the groups. Analysis determined that no significant differences existed between these groups ($t$=.854, $df$= 649, $p$= .394). Additional analyses on the 4 domains of the Sensitivity scale (See Table) found that significant differences existed in groups sensitivity along the sensitivity to discrimination ($t$=-3.568, $df$= 674, $p$= .000) and Behaviors toward deaf ($t$=3.543, $df$= 672, $p$= .000) existed at $\alpha$= .05. The results indicate that students who are Low achieving show greater endorsement of institutional discrimination toward hearing students but show more positive behaviors with deaf students such as endorsing that they "have deaf friends". Though these relationships were significant, caution must be taken as the effect size for each was small (d=.027, d=.272) and indicates that this relationship may not be meaningful in the general population. When comparing mean sensitivity levels on the remaining domains, sensitivity to privilege and beliefs about the deaf, there was no significant relationship mean difference for this group ($t$=-.485, $df$= 672, $p$= .628; $t$=-.037, $df$= 668, $p$= .971)

Participant race was provided and compared using an Independent Sample T-test to determine whether differences in sensitivity were present. Because of a relatively small sample of racial minority students relative to Caucasian students, the racial minority groups were combined to create one larger group. These two groups, Caucasian (n=988) and Racial Minority (n=291) were compared on the mean sensitivity scores and found to have no significant

differences ($t$=.946, $df$= 1277, $p$= .344). Additional analyses were completed to determine whether group differences existed on the separate domains of sensitivity (See Table). Results indicated that the Caucasian group mean was significantly less on sensitivity to discrimination, indicating that they were more likely to endorse that hearing people are discriminated against unfairly on campus ($t$=-2.004, $df$= 1314, $p$= .045). However, Caucasian students also held more favorable beliefs about deaf students such as believing they were "just as smart" ($t$=6.437, $df$= 1310, $p$= .000). The effect size for this relationship was moderate (d=.407) and therefore is likely a meaningful difference in the sample. When comparing mean sensitivity levels on the remaining domains, sensitivity to privilege and behaviors toward the deaf, there was no significant relationship mean difference for this group ($t$=-1.589, $df$= 1313, $p$= .112; $t$=-1.702, $df$= 1313, $p$= .089)

**Regression Analysis-Predictors of Sensitivity**

A stepwise regression analysis was conducted to determine the factors that best predicted sensitivity scores. Hypotheses suggested that one's previous exposure to the deaf culture/deaf students would predict sensitivity scores. Based on this hypothesis the following variables were entered as independent variables and possible predictors of sensitivity: Have Hard of Hearing friends, Year in School, Sex, Race, Shared Housing, Exposure to deaf prior to College, Deaf Family, Deaf Friends, and Achievement (GPA). Accounting for 21.3% of the variance in Sensitivity Scores, Deaf friends, Sex and Year in School were all significant predictors ($F_{(1,635)}$ = 151.039, p=.000).

# Chapter 5
## Discussion

The purpose of this study was to examine whether an individual's awareness and conceptualization of a dominant cultural identity impacted one's sensitivity to minority cultural groups. Specifically, would individuals who endorsed having a highly developed hearing identity show greater levels of sensitivity to the minority deaf culture. In addition, sample characteristics such as prior or current exposure to the Deaf culture, academic achievement, race, and sex, were examined to explore differences in mean sensitivity for these groups.

Though researchers have tried to conceptualize hearing Identity from a deaf perspective (Glickman & Carey 1993; Leigh et al, 1998; Maxwell, Mc-Call, & Zea, 2000), there is limited research about what it means to be a hearing person in a largely hearing culture and how individuals conceptualize this dominant cultural identity into an understanding of their world. Due to lack of research in this area, hypotheses were drawn from existing conceptualizations of identity and development among ethnic and culturally diverse populations. Regarding hearing identity, it was hypothesized that individuals with a strong hearing identity (High-ID) would show the highest levels of sensitivity to the minority Deaf culture as well as hold the most favorable attitudes toward them. Results of analysis indicated that despite previous research which supported this relationship in ethnic minorities (Romero & Roberts, 1998; Saylor & Aries, 1999; Santos et al, 2007) the findings of this study with cultural minority groups were more complex. Overall, it appears that individuals identified with a strong hearing identity were significantly less sensitive to the deaf culture. Though current findings are quite contrary to the hypothesis, this relationship may be explained by a number of factors. First, whereas ethnic/cultural affirmation have been shown to promote openness to out groups (Romero & Roberts, 1998) and a strong ethnic identity may promote well being for many (Saylor & Aries,

1999; Santos et al, 2007), these findings come from populations which are ethnic minorities, rather than dominant social groups. Though dominant social group identity has been conceptualized by researchers such as Helms (1990), models largely fail to address that many people do not perceive the privileges and advantages associated with their dominant group identity. Individuals with strong dominant group identities may attribute their place in society and accomplishments to a sense of superiority and social dominance, rather than recognizing the unique experiences of their own culture and that of others. Individuals with a less developed sense of hearingness, may be at a different point in their identity development in which they are still open to exploration and expansion. Therefore, some individuals who identify themselves as (High-ID) may be in a state of Identity Foreclosure (Marcia, 1966) in which they have committed to the identity without exploring the set of values and ideals associated with it. These individuals commonly have a weak sense of self and are not able to identify strengths and weaknesses as an individual.

Further exploring the various domains that make up the sensitivity scale revealed that the relationship between dominant and minority cultural groups is more complex than that of ethnically diverse individuals. To examine the specific attitudes and beliefs of participants, the separate domains of sensitivity were explored. First, High ID participants were found to have greater sensitivity in the area of privilege. These findings imply that High ID individuals endorsed items which indicated that hearing people have advantages and opportunities to become successful that are not available to the Deaf/HH. Though this appears to suggest sensitivity, it is likely that, as previously discussed, for many High ID individuals, questions which assessed sensitivity to privilege may have been measuring a different construct; specifically, social superiority. Therefore, rather than measuring sensitivity to the challenges faced by deaf students,

these questions may indicate the belief that hearing people are socially superior or dominant. This explanation is further supported by findings which indicate that people who are High ID are less sensitive to discrimination and hold less favorable opinions about Deaf/HH students when compared to hearing students. Together, this indicates that High-ID individuals believe that Deaf/HH students are not equals or do not have the same capabilities as hearing students and that the college discriminates against hearing people while giving advantages to deaf students. Therefore, for those who believe that hearing individuals are socially dominant/superior, questions such as those in the sensitivity to privilege domain may be measuring a different construct that is related to an inflated sense of superiority or a state of identity foreclosure.

The second hypothesis postulated that students with more exposure to the deaf culture would have higher levels of sensitivity. To examine how exposure impacts sensitivity levels, a number of factors were examined including; endorsement of having deaf/HH friends and family, living in proximity to a large deaf population (hometown), year in school, and shared housing with a deaf/HH student. Overall, those who endorsed having deaf and hard of hearing friends and family showed significantly greater sensitivity levels than those who did not. Additionally, individuals who endorsed moderate to daily exposure to deaf culture showed significantly greater levels of sensitivity than their peers who endorsed having minimal exposure. These findings are generally supported by research which has found that youth who are exposed to diverse contexts have more empathy for out-groups (Duncan, 2003). On the other hand there were a number of exposure factors which did not have a significant impact on the sensitivity levels of individuals. For example, there were no mean differences between individuals who lived in proximity to a large deaf population, between individuals who shared housing with a deaf/HH student, or between individuals who had more exposure to deaf students in an educational setting.

Given these disparate findings, it is clear that it is not simply the act of being around or near deaf individuals which promotes sensitivity to their culture. Chang (2001) found that it was not merely presence of "other", but individuals who interact across social and educational settings who see the most profound benefits of diversity. In addition, this cross cultural exchange allows for the development of student's values and ethical standards through reflection, significantly reduced levels of racial prejudice, and promoted students thinking in deeper, more critical, and active ways when confronting biases (Chang, 2001). Therefore, it is likely that the quality of interaction between deaf family and friends as well as the quantity of interactions promote greater sensitivity via the free exchange of ideas which break down barriers and biases. Whereas these students interact in a meaningful way with deaf/HH students and family, simply living or going to school in proximity of deaf individuals is not sufficient.

The third and final hypothesis examined how individual sample characteristics impacted sensitivity level. First, participant race was explored to see whether different ethnic groups were more sensitive to deaf culture. Specifically, it was hypothesized that individuals who belonged to an ethnic minority group would be more sensitive. This idea was supported by research which suggests that individuals with greater ethnic identity have greater levels of ethno cultural empathy toward out groups (Nesdale, Griffith, Durkin, Maass, 2005). Additionally, it was believed that given their minority status and the daily challenges that are faced as a result, individuals would be able to understand or empathize with the experiences of others. Results indicated, however, that there were no group mean differences between Caucasian and ethnic minority students on sensitivity levels. Follow up analysis were conducted to explore the specific domains of sensitivity to understand whether smaller attitudinal or behavioral differences existed. Findings indicated that racial minorities were more sensitive on the domains of

awareness of discrimination, but were less sensitive in the area of holding favorable beliefs about deaf students and had no significant differences between sensitivity to privilege and behaviors toward the deaf. Together this information suggests that racial minority students were more aware of the privilege inherent in being a hearing person, but overall held less favorable attitudes toward deaf students such as not believing they were equals in communication or intellect, and having misgivings about their culture. Given these findings, it is believed that individuals who are racial minorities may be more aware of the difficulties that are faced as a result of being a minority in a larger dominant culture, however, may hold less favorable opinions about Deaf students.

For exploratory analyses, both academic achievement and participant sex were explored. Academic achievement, as conceptualized by GPA (Grade Point Average) was examined in order to see whether there were group differences between the highest and lowest achievers. It was hypothesized that individuals who were low achieving would endorse lower levels of sensitivity particularly in the domain of institutional discrimination and awareness of privilege. Theoretically, it was believed that individuals who themselves were struggling in school may place the blame on an out-group and as a result endorse that deaf students had distinct advantages in their education (ie. access to notetakers). Overall, there were no statistically significant differences between these groups on sensitivity. However, additional analysis along the four domains of the sensitivity scale found results which indicated that low achievers showed less sensitivity in the area of discrimination but generally engaged in more positive behaviors with deaf students.

This information suggests that low achieving students believe that as a hearing person, they are discriminated against on campus because of their inability to access the same services

and that there are inherent advantages as a deaf student. On the contrary, they acknowledge having deaf/HH friends and generally do not ignore or feel awkward communicating with them. Intuitively, these findings make sense. Given the fact that low achieving students are likely struggling in school, they may be less aware or sensitive to the challenges that a deaf student faces in accomplishing the same academic goals. For example, a deaf student who must rely on their visual intake and the ASL interpretation of another to access the information that a hearing student can listen to and take notes on. While it may appear to be an advantage initially, further examination reveals that access to programs like tutoring and note taking are necessary to level the playing field and avoid discrimination of the basis of a handicapping condition.

Participant gender was examined to determine whether male and female students showed mean differences in their level of sensitivity. Results indicated that females were significantly more sensitive than their male peers. Although the magnitude of this relationship is small, it is likely that the cultural and societal forces which create gender roles and stereotypes in which women are more engendered to be more caring and sensitive may impact this observation.

Lastly, a regression analysis was done to examine predictors of sensitivity. Results indicated that the having deaf friends, sex, and year in school were significant predictors. This result is intuitive given previous findings where individuals who have deaf friends and do not have deaf friends show significant differences in their mean sensitivity. It once again reaffirms that individuals who have meaningful contact with deaf individuals are able to overcome barriers and biases in order to grow and develop.

**Limitations**

Despite the utmost care in the collection and development of this research there are some inherent limitations to this project. First, although the sample that was collected was large and

generally appeared to be representative of the larger university population, the response rate was low and reflected only 10% of the desired population. Due to restrictions on the use of campus list serve and email, the survey was not able to be redistributed as had been planned. Given the relatively small percentage of students who replied to the survey it is possible that this sample may reflect individuals with a strong interest in the deaf/HH population, a risk that is inherent with survey research.

In addition a strong interest in the topic and somewhat controversial or uncomfortable survey questions may have impacted who chose to respond. There were individuals who reported to the examiner that they were pleased and happy to answer questions about the deaf/HH population, and there were people who clearly felt as though this violated their ideas of what a survey about "campus diversity" entailed. The survey asked people to answer questions regarding their biases, prejudices, and identity which were likely unacknowledged or previously unexplored. The response from some reflected the same discomfort that Sue and colleagues (2004) found when working with individuals to explore white identity. On the contrary, while some people may have logged into the survey and then decided not to take it, others with a strong interest may have continued and could reflect a bias in the data.

Despite the fact that anonymity was ensured, concerns regarding social desirability arise when asking sensitive questions. To ensure that students answered questions honestly, the principle researcher should have designed the scale with reliability and honesty scale built in. Additionally, issues regarding the ordering of questions on the survey were raised because individuals were asked all of the sensitivity items prior to the identity scale. Because of the issues with ordering, individuals who had previously never considered themselves as "hearing" may have been primed to think about that aspect of their identity and thus may have endorsed

that hearingness was more important to their identity as a result. The collection of demographic information prior to answering question regarding sensitivity and hearing identity would also have been preferable so that information regarding participants who chose to discontinue their involvement would have been collected.

Lastly, caution must be taken in the interpretation of these findings as many of the relationships had generally low effect size and therefore may be meaningless in the general population. Researchers would likely benefit from repeating this with a larger sample in order to determine whether the results can be replicated. In addition, although the reliability of the hearing and sensitivity scales is considered adequate for research, higher reliability is desirable to improve its psychometric properties. In addition, it is possible that hearing identity scale measures different constructs for different individuals. In particular, given the findings with high hearing identified people a validation of this tool would be recommended.

**Directions for Future Research/Contributions**

Given that this was an exploratory, initial investigation of this body of research, future researchers can significantly improve on the above areas of limitation. Specifically, repeating with a larger and more representative sample with corrections for ordering and an honesty scale built in. It is likely that this would improve the statistical meaningfulness and allow to be generalized to the larger population. Additional work should be completed to understand and validate the hearing identity scale to ensure that it is measuring the same construct across the sample.

Future research should also expound on the mean differences found between individuals who endorse having deaf friends and family. Specifically, the directionality of this relationship is unknown, for example are individuals more sensitive to deaf because they have deaf friends or

are they friends with deaf people because they are more sensitive, accepting, and understanding. This could be accomplished by broadening the scale to determine a general sensitivity measurement which may apply to other minority groups as well. Additional research may also want to explore the unique issues related to academia, for example the competition for jobs, awards, honors etc. Lastly, although Deaf and Hard of Hearing students were not used in analyses, these individuals represent an important part of the body of research and should be explored in the future.

Despite its shortcomings, this research has raised awareness about the previously unexplored, subtle, biases and prejudices that are present in this population. Although it is exploratory in nature, a greater understanding of cultural minority sensitivity has been gained. It stresses the importance of creating a campus environment that is supportive of all students by attacking these biases and breaking down barriers that prevent forward movement. These findings can help to guide campus decisions about diversity and diversity experiences beyond the traditional racial/ethnic arena. This information can also serve as a guide for campus programs and policies which attempt to improve campus climate, by allowing students to debate, share opinions, and alter their personal and societal values and thus grow and improve both personal and institutional wellbeing.

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Appendix A

## Informed Consent Form

I would like to invite you to participate in this study. If you agree to participate, I will be asking you to fill out a short questionnaire. The questionnaire focuses on your diversity experiences on campus. Along with this questionnaire, non identifiable background questions will be asked to help the researcher collect a norm sample regarding population characteristics. To complete these two measures, it will require approximately 15 minutes. Your participation will help to fulfill the researcher's thesis requirements toward completion of a Master's Degree.

**RISKS**

There are no anticipated risks associated with participation in this study.

**PAYMENT**

All subjects who participate in this project and provide confidential contact information which will not be tied to survey answers, will be entered into a drawing to win a $50 Barnes and Noble Gift Card.

**BENEFITS**

This study will indirectly benefit the participant by increasing knowledge and understanding of diversity experiences on campus with the hope of improving overall campus climate. Although there are no direct benefits from participating in this research, it provides an opportunity for you to participate in research that is happening on campus.

**CONFIDENTIALITY**

To maintain confidentiality, your name will not be associated with the data that is collected. To further ensure anonymity, a code will be assigned in place of your name. The only form that will have your name on it is this consent form. This form will be stored separately from the questionnaire data and only the primary investigator will have access to this information. If participants wish to be contacted in the event that they are chosen from the drawing, they must provide contact information on this form.

**CONTACT**

If you have any questions, you can contact Rachael Sando at RMG1948@rit.eduIf you experience any discomfort as a result of taking part in this research contact; University Counseling Center

**PARTICIPATION**

Your participation in this study is strictly voluntarily. You may withdraw from this study anytime without penalty and without loss of benefits for which you are entitled. If you do withdraw from this study before the all the data is collected your data will be destroyed and it will not be included in analysis.

**CONSENT**

I have read and understand this information stated above. I have received a copy of this form. I agree to participate in this study.

*Please note that if you are under the age of 18 years old you do not qualify to participate in this study.*

☐ I would like to participate in this study

***Participants who are interested in entering the drawing will be redirected to a separate survey to provide contact information. This survey will not be tied the the results of the previously completed survey.

Appendix B

**Demographic Information**

Hometown _____ . _____
(City/Town) (State)

Age _____

Circle the one that applies best.

1.) 1st year 2nd year 3rd year 4th year 5th year Graduate

2.) Female Male

3.) International student US student

4.) Caucasian (non Hispanic) African American Hispanic Asian American Indian Other

5.) Hearing Deaf Hard of Hearing

What college is your major in? (Check which applies)

Kate Gleason College of Engineering _____

College of Applied Science and Technology _____

E. Phillip Saunders College of Business _____

B. Thomas Golisano College of Computing and Information Sciences _____

College of Imaging Arts and Sciences _____

College of Liberal Arts _____

College of Science _____

National Technical Institute for the Deaf _____

What is your cumulative GPA? _____

Do you now or have you in the past shared housing with a deaf and hard of hearing classmate? _____ yes ____ no

How much exposure to deaf culture have you had prior to attending RIT? Minimal Moderate Daily

Approximately how many classes have you attended that have had interpreters? _____

Approximately how many classes have you had with deaf students? _____

Do you have deaf family members?_____

Do you have hard of hearing friends?_____

Do you have deaf friends?_____

Appendix C

**Hearing Identity Scale**

Instructions: Please mark the number from the scale that best corresponds to your answer.

| No | Not Sure/ Never thought about it | Yes |
|---|---|---|
| 1 | 2 | 3 |

1. Being Hearing is an important part of who I am_____.
2. Hearingness plays an important part in my life_____.
3. I feel that I am part of a hearing culture_____.
4. I have a strong sense of being hearing_____.
5. I am proud of being hearing_____.
6. If I could choose three words to describe me, hearing would be one of them_____.

Appendix D

## Sensitivity Scale

Instructions: Please mark the number from the scale that best corresponds to your answer.

| No | Not Sure/ Never thought about it | Yes |
|---|---|---|
| 1 | 2 | 3 |

1.) Deaf people in the college have certain advantages because of their hearing status _____

2.) A person with a hearing loss has the same opportunities as a hearing person_____

3.) Deaf people do not have the same opportunities as hearing people in College_____

4.) Everyone who works hard, no matter of their hearing status, has an equal chance to become rich _____

5.) Campus policies for the Deaf, such as access to note takers and reserved seats in class, discriminate unfairly against hearing people _____

6.) Hearing people are sometimes discriminated against on campus because of their hearing status _____

7.) Due to student's deafness, programs such as access to note takers and reserved seats in class are necessary to create equal access to information for students _____

8.) Deaf people have certain advantages because of their hearing status _____

9.) Deaf people do not try to fit into the culture and values of hearing people _____

10.) I feel sorry for deaf people who rely on sign language _____

11.) I don't like it when deaf people use sign language_____

12.) I don't understand why deaf people have their own culture _____

13.) The focus of deaf education should be teaching deaf children to speak and lip-read_____

14.) It is best for deaf people to communicate with speech and lip-reading Hearing people express themselves better that deaf people _____

15.) It is important to find a cure for deafness _____

16.) I think that Deaf people are not as smart as hearing people _____

17.) I don't trust Deaf people _____

18.) American Sign Language and English are different languages of equal value _____

19.) I have both deaf and hearing friends_____

20.) Some hearing people genuinely support deaf culture and deaf ways _____

21.) I feel comfortable with hearing and deaf people _____

22.) I have both hearing and deaf friends _____

23.) I feel awkward communicating with deaf people _____

24.) Since I don't know how to communicate with Deaf people I avoid socializing with them _____

Appendix E

## Sensitivity Scale-Domain

Sensitivity to Discrimination

1. Campus policies for the Deaf, such as access to note takers and reserved seats in class, discriminate unfairly against hearing people
2. Hearing people are sometimes discriminated against on campus because of their hearing status
3. Due to student's deafness, programs such as access to note takers and reserved seats in class are necessary to create equal access to information for students
4. Deaf people have certain advantages because of their hearing status

Sensitivity to Privilege

5. Hearing people in the college have certain advantages because of their hearing status
6. A person with a hearing loss has the same opportunities as a hearing person
7. Deaf people do not have the same opportunities as hearing people in College
8. Everyone who works hard, no matter of their hearing status, has an equal chance to become rich

Behaviors toward Deaf

9. I have both deaf and hearing friends
10. I feel comfortable with hearing and deaf people
11. I have both hearing and deaf friends
12. I feel awkward communicating with deaf people
13. Since I don't know how to communicate with Deaf people I avoid socializing with them
14. I don't trust Deaf people

Beliefs about Deaf

15. I feel sorry for deaf people who rely on sign language
16. I don't like it when deaf people use sign language
17. I don't understand why deaf people have their own culture
18. The focus of deaf education should be teaching deaf children to speak and lip-read
19. It is best for deaf people to communicate with speech and lip-reading
    Hearing people express themselves better that deaf people
20. It is important to find a cure for deafness
21. I think that Deaf people are not as smart as hearing people
22. American Sign Language and English are different languages of equal value
23. Some hearing people genuinely support deaf culture and deaf ways

Table 1

*Individual Characteristics as Percentage of the Sample*

| Characteristic | Sample Percent (n=1507) |
|---|---|
| Hometown | |
| Monroe | 77.7 |
| Non-Monroe | 19.1 |
| Missing | 3.2 |
| Region | |
| International | 6.8 |
| Northeast | 62.4 |
| Mid-Atlantic | 15.8 |
| Great Lakes | 5.2 |
| Central Plains | .3 |
| Southeast | 1.7 |
| Rocky Mountain | .7 |
| Pacific Alaska | .9 |
| Pacific | 1.9 |
| Missing | 3.3 |
| Year in School | |
| 1st Year | 16.4 |
| 2nd Year | 16.9 |
| 3rd Year | 15.9 |
| 4th Year | 19.4 |
| 5th Year | 11.0 |
| Graduate | 18.2 |
| Missing | 2.1 |
| Sex | |
| Male | 48.4 |
| Female | 48.6 |
| Missing | 3.0 |
| Student Status | |
| US Student | 88.3 |
| International Student | 8.6 |
| Missing | 3.1 |
| Race/Ethnicity | |
| Caucasian | 74.1 |
| African American | 3.3 |
| Hispanic | 4.5 |
| Asian | 10.9 |
| American Indian | .2 |
| Other | 4.5 |
| Missing | 2.6 |
| Hearing Status | |
| Hearing | 88.6 |
| Deaf | 4.4 |
| Hard of Hearing | 4.1 |

Table 2

*Contrast of Mean Sensitivity Differences for High-ID and Low-ID Hearing Participants*

| | High ID | | Low ID | | | | |
|---|---|---|---|---|---|---|---|
| Variable | M | SD | M | SD | t | p | Cohen's d |
| Sensitivity | 27.99 | 5.66 | 28.88 | 6.13 | 2.125 | .034* | .15 |
| Privilege | 3.20 | 2.14 | 2.74 | 2.22 | -2.952 | .003** | .21 |
| Discrimination | 4.39 | 2.51 | 4.96 | 2.57 | 3.177 | .002** | .22 |
| Beliefs a/b Deaf | 13.96 | 3.40 | 14.51 | 2.90 | 2.499 | .013* | .17 |
| Behaviors Deaf | 7.64 | 3.59 | 7.99 | 3.39 | 1.470 | .142 | .10 |

Note. High ID=Highly hearing identified, Low-ID=Low Hearing Identified; *= significant at $p \leq .05$, **=significant at $p \leq .01$

Table 3

*Contrast of Mean Sensitivity Differences on Exposure*

| | Yes | | No | | | | |
|---|---|---|---|---|---|---|---|
| Variable | M | SD | M | SD | t | p | Cohen's d |
| Exposure | | | | | | | |
| Deaf Family | 30.92 | 5.87 | 28.61 | 5.78 | -3.06 | .002** | .40 |
| Deaf Friends | 31.68 | 4.94 | 26.14 | 5.26 | -19.37 | .000** | 1.09 |
| HH Friends | 30.37 | 5.57 | 26.03 | 5.16 | -13.90 | .000** | .81 |
| Shared Housing | 29.10 | 6.51 | 28.65 | 5.69 | -.99 | .322 | .07 |

Note.HH= Hard of Hearing, *= significant at $p \leq .05$, **=significant at $p \leq .01$

Table 4

*Contrast of Mean Sensitivity Differences on Exposure: Hometown*

| | Local | | Not Local | | | | |
|---|---|---|---|---|---|---|---|
| Variable | M | SD | M | SD | t | p | Cohen's d |
| Exposure | | | | | | | |
| Hometown | 29.13 | 5.99 | 28.65 | 5.74 | -1.203 | .229 | .082 |

Note. Local=Students who gave hometown within county of university, Non-Local=all others who participated; *= significant at $p \leq .05$, **=significant at $p \leq .01$

Table 5

*Contrast of Mean Sensitivity Differences on Exposure*

| | Minimal | | Moderate | | Daily | | | |
|---|---|---|---|---|---|---|---|---|
| Variable | M | SD | M | SD | M | SD | f | p |
| Sensitivity | 28.32[a] | 5.65 | 29.85[b] | 5.97 | 30.68[b] | 6.68 | 10.720 | .000** |

Note. *= significant at p≤.05, **=significant at p≤.01; Group means sharing the same superscript to not differ from each other

Table 6

*Contrast of Mean Sensitivity Differences on Exposure: Year in School*

| | 1st | | 2nd | | 3rd | | 4th | | 5th | | Graduate | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Variable | M | SD | M | SD | M | SD | M | SD | M | SD | M | SD | f | p |
| Sensitivity | 28.08 | 5.68 | 28.25 | 6.10 | 29.17 | 5.65 | 28.96 | 6.23 | 28.85 | 5.69 | 29.02 | 5.38 | 1.274 | .273 |

Note. *= significant at p≤.05, **=significant at p≤.01

Table 7

*Contrast of Mean Sensitivity Differences for High and Low Achievers*

| Variable | Low-Ach | | High-Ach | | t | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | |
| Sensitivity | 29.02 | 5.67 | 28.64 | 5.75 | .854 | .394 | .06 |
| Privilege | 2.93 | 2.09 | 3.01 | 2.19 | -.485 | .628 | .04 |
| Discrimination | 4.44 | 2.52 | 5.14 | 2.57 | -3.568 | .000** | .03 |
| Beliefs a/b Deaf | 14.48 | 2.93 | 14.48 | 3.15 | -.037 | .971 | 0 |
| Behaviors Deaf | 8.30 | 3.25 | 7.39 | 3.43 | 3.543 | .000** | .27 |

Note. *= significant at $p \leq .05$, **=significant at $p \leq .01$, High Ach=High Achieve (GPA≥3.75), Low Ach=Low Achieve (GPA≤3.1)

Table 8

*Contrast of Mean Sensitivity Differences for Males and Females*

| Variable | Male | | Female | | t | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | |
| Sensitivity | 28.04 | 5.64 | 29.40 | 5.89 | -4.209 | .000* | .24 |

Note. *= significant at p≤.05, **=significant at p≤.01

Table 9

*Contrast of Mean Sensitivity Differences for Caucasian/Ethnic Minority Students*

| Variable | Caucasian M | Caucasian SD | Ethnic Minority M | Ethnic Minority SD | t | p | Cohen's d |
|---|---|---|---|---|---|---|---|
| Sensitivity | 28.80 | 5.87 | 28.44 | 5.65 | .946 | .344 | .06 |
| Privilege | 2.90 | 2.18 | 3.13 | 2.10 | -1.589 | .112 | .11 |
| Discrimination | 4.73 | 2.54 | 5.06 | 2.39 | -2.004 | .045* | .13 |
| Beliefs a/b Deaf | 14.67 | 2.88 | 13.41 | 3.30 | 6.437 | .000** | .20 |
| Behaviors Deaf | 7.79 | 3.49 | 8.17 | 3.28 | -1.702 | .089 | .11 |

Note. *= significant at $p \leq .05$, **=significant at $p \leq .01$

Table 10

*Regression Analysis: Predictors of Sensitivity*

| | | | Sensitivity to Deaf Culture | |
|---|---|---|---|---|
| | | | Model 3 | |
| | | | Deaf Friends/Sex/Year in School | |
| Variable | Model 1 *B* | Model 2 *B* | *B* | 95% CI |
| | Deaf Friends | Deaf Friends/Sex | | |
| Deaf Friends | .438 | .431 | .435 | 4.182-5.771 |
| Sex | | .115 | .121 | .591- 2.182 |
| Year in School | | | .088 | .060- .517 |
| $R^2$ | .192 | .205 | .213 | |
| F | 151.04** | 81.903** | 57.10** | |
| $\Delta R^2$ | | .013 | .008 | |
| $\Delta F$ | | 10.506 | 6.160 | |